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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,662	02/27/2004	Hans Peter Bluem	63951/P013US/10211125	7571
29053	7590	11/14/2005	EXAMINER	
DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P.			A, MINH D	
2200 ROSS AVENUE			ART UNIT	
SUITE 2800			PAPER NUMBER	
DALLAS, TX 75201-2784			2821	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/789,662

Applicant(s)

BLUEM, HANS PETER

Examiner

Minh D. A

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-10, 12-15 and 19 is/are rejected.
- 7) ☒ Claim(s) 3, 11 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-10, 12-15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Lien et al (US 5,698,949).

Regarding claim 1, Lien discloses an electron gun, comprising: a cathode (50) having a longitudinal axis and operable to generate an electron beam along the longitudinal axis when driven by resonant electromagnetic radiation of a particular frequency; a cavity (42 and 46) surrounding the cathode (50) and operable to resonate when electromagnetic radiation of the particular frequency is introduced into the cavity (42 and 46); and an energy input (52) coupled to the cavity (42 and 46) and operable to introduce electromagnetic radiation of the particular frequency into the cavity(42 and 46) along the longitudinal axis of the cathode (50). See figures 1-7, col.5, lines 10-67 to col.9, lines 1-67.

Regarding claims 2 and 10, Lien discloses the cavity (50) is axi-symmetric around the longitudinal axis. See figures 3-7.

Regarding claim 4, Lien discloses the cavity comprises one an exit channel.
See figure 1.

Regarding claim 5, Lien discloses the energy input (52)) comprises a coaxial line (56) having a center conductor (58); and the cathode (50) comprises an extension of the center conductor of the coaxial cable. See figures 3-7.

Regarding claims 6 and 12, Lien discloses the cathode (50) is operable to be selectively positioned in the cavity so that changing the position of the cathode in the cavity changes the particular frequency at which the cavity resonates. See figures 3-7.

Regarding claims 7 and 13, Lien discloses the cathode (50) is selectively positioned by a connector coupling the coaxial cable to the cavity (42 and 46). See figures 3-7.

Regarding claims 8 and 14, Lien discloses the cavity (42 and 46) comprises an end-wall operable to be selectively deformed to change the particular frequency at which the cavity resonates. See figures 3-7.

Regarding claim 9, Lien discloses a cavity operable to resonate when electromagnetic radiation of a particular frequency is introduced into the cavity (42 and 46); and a coaxial line (56) coupled to the cavity (42 and 46) having a center conductor (58) that extends into the cavity (42 and 46), the center conductor (58) operable to produce an electron beam along a longitudinal axis of the coaxial cable when driven by resonant electromagnetic radiation of the particular frequency, wherein the coaxial line (56) is operable to introduce electromagnetic radiation of the particular frequency into the cavity along the longitudinal axis of the coaxial cable. See figures 1-7, col.5, lines 10-67 to col.9, lines 1-67.

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Prior art does not teach that, for adjusting the particular frequency at which the cavity resonates by repositioning the cathode; and introducing electromagnetic radiation of the new resonant frequency into the cavity along the longitudinal axis of the cathode recited in dependent claims 16 and 18.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lebouter et al (US 5,506,473) and Soffer et al (US 5,506,473) are cited to show an electron gun.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Regarding claim 15, Lien discloses electron gun for providing a cavity operable to resonate when electromagnetic radiation of a particular frequency is introduced into the cavity; providing a cathode within the cavity operable to generate an electron beam along a longitudinal axis when being driven by resonant electromagnetic radiation of the particular frequency; and introducing electromagnetic radiation of the particular frequency into the cavity along the longitudinal axis of the cathode. See figures 1-7, col.5, lines 10-67 to col.9, lines 1-67.

Regarding claim 19, Lien discloses the electromagnetic radiation is introduced into the cavity by a coaxial line coupled to the cavity; and the cathode comprises an extension of a center conductor of the coaxial cable. See figures 3-7.

Allowable Subject Matter

3. Claims 3, 11 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art does not teach that, the electron gun comprises a solenoid (12) disposed around the cavity and operable to produce a magnetic field that reduces transverse emittance of the electron beam; and the solenoid is operable to be positioned at any point along the length of the cavity in order to adjust the amount of reduction of the transverse emittance of the electron beam recited in dependent claims 3 and 11.

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Examiner

Minh A

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11/05/05

Shih-Chao Chen
11/8/05

SHIH-CHAO CHEN
PRIMARY EXAMINER